

Claims

- 5 1. A filter and blower unit for breathing masks or
bonnets with a breathing air filter that is driven by
a direct current motor and designed for use in
potentially explosive areas, characterized in that
the direct current motor comprises a fixed stator
10 coil module (1) and a magnetic rotor (12) rotating
around the peripheral surface of said stator coil
module (1), in that the coils (5) located at the
stator coil module (1) and their electric terminals
are embedded in a non-conductive casting compound
15 (6), in that a motor control module (8) and a voltage
converter module are located upstream of the stator
coil module (1) for power input via shielded electric
lines (7) that are also embedded in a non-conductive
casting compound (6), and in that the required power
20 is supplied at a current to voltage ratio at which
the voltage does not exceed the value required for
intrinsic safety.
- 25 2. The filter and blower unit according to claim 1,
characterized in that the magnetic rotor (12)
comprises a shaft (13) centered in a pot-type case
(11) that is pivoted in a bearing shell (3) formed in
the center of the stator coil module as well as
magnets (12a) attached peripherally to its inner
30 surface, and blades (14) attached peripherally to its
outer surface.
- 35 3. The filter and blower unit according to claim 1,
characterized in that the stator coil module (1), the
motor control module (8) and the voltage converter
module (9) are located on a base circuit board (10)

on which the electric connecting lines (7) run internally or are embedded in a casting compound.

- 5 4. The filter and blower unit according to claim 1, characterized in that power is supplied from an intrinsically safe accumulator or battery pack (15).